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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,207	10/19/2001	Sachin G. Deshpande	8371-144	5056

46404 7590 10/17/2006

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EXAMINER	
MILLS, DONALD L	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,207	DESHPANDE, SACHIN G.	
	Examiner	Art Unit	
	Donald L. Mills	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities:

Regarding claim 1, line 6, "data" should be corrected to – said enhancement layer –.

Regarding claim 1, line 8, "another layer" should be corrected to – said enhancement layer –.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaddha et al. (U.S. Patent No. 5,768,535), hereinafter referred to as Chaddha, in view of Baker et al. (US 6,775,231 B1), hereinafter referred to as Baker.

Referring to claims 1, 13, and 17, Chaddha et al. discloses a method for transmitting data over a transmission channel, comprising:

Accepting, at an input of a data transmitter (see Fig. 1), *data that has been encoded into a base layer* (base layer, col. 3 lines 11-22 and 37-52, col. 5 lines 21-30, col. 7 lines 1-15, col. 9 lines 27-45 and col. 10 lines 25-35) *and an enhancement layer* (enhancement layer, col. 3 lines 11-22, col. 3 lines 36-52, col. 5 line 1 and 22-29, col. 9 lines 27-43 and col. 10 lines 17-29);

transmitting the base layer (base layer, col. 3 lines 11-22 and 37-52, col. 5 lines 21-30, col. 7 lines 1-15, col. 9 lines 27-45 and col. 10 lines 25-35) *on the transmission channel.*

Chaddha does not disclose *determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer already transmitted; and transmitting the enhancement layer if there is enough bandwidth available to transmit another layer.*

Essentially, the claimed invention teaches encoding data into multiple traffic classes requiring different levels of Quality of Service (QoS). Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base and enhancement layer) based on actual traffic load measured for each service class (See column 5, lines 22-43.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker in the system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Regarding claim 2 as explained in the rejection statement of claim 1, Chaddha and Baker disclose all of the claim limitations of claim 1 (parent claim).

Chaddha does not disclose *wherein determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer comprises calculating a bandwidth previously used by the data transmitter in previously transmitting layers.*

Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base and enhancement layer) based on actual traffic load measured for each service class (See column 5, lines 22-43.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker in the system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Regarding claims 3, 14, 16, and 18-20 as explained in the rejection statement of claims 1, 13, and 17; Chaddha and Baker disclose all of the claim limitations of claims 1, 13, and 17 (parent claims).

Chaddha does not disclose *wherein determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer comprises measuring data*

traffic on the transmission channel to determine if enough bandwidth exists to transmit additional layers.

Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base and enhancement layer) based on actual traffic load measured for each service class (See column 5, lines 22-43.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker in the system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Regarding claims 4-7 and 15 as explained in the rejection statement of claims 1 and 13, Chaddha and Baker disclose all of the claim limitations of claims 1 and 13 (parent claims).

Chaddha does not disclose *wherein the data transmitter has a pre-set target data rate, and wherein determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer already transmitted comprises determining whether an average bandwidth used by the data transmitter over a last measuring period is below the pre-set target data rate.*

Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base and enhancement layer) based on the averaged traffic load measured for each service class over a period of time and the maximum transmission rate (See column 5, lines 22-43 and column 6, lines 1-6.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker in the system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Referring to claims 8, 21, and 22 as explained in the rejection statement of claims 1 and 17; Chaddha and Baker disclose all of the claim limitations of claims 1 and 17 (parent claims). Chaddha further teaches *wherein the data is additionally encoded as a second enhancement layer* (second enhancement layer, col. 3 lines 11-22, col. 3 lines 36-52, col. 5 line 1 and 22-29, col. 9 lines 27-43 and col. 10 lines 17-29.)

Chaddha does not disclose *determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base and enhancement already transmitted by the*

data transmitter; and transmitting the second enhancement layer available to transmit the second enhancement layer.

Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base layer and first/second enhancement layers) based on the averaged traffic load measured for each service class over a period of time and the maximum transmission rate (See column 5, lines 22-43 and column 6, lines 1-6.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker in the system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Referring to claim 9, the primary reference further teaches *wherein transmitting the base layer on the transmission channel comprises transmitting the base layer* (base layer, col. 3 lines 11-22 and 37-52 col. 5 lines 21-30, col. 7 lines 1-15, col. 9 lines 27-45 and col. 10 lines 25-35) *on a LAN* (see Network, Fig. 1) *connection between two or more computers.*

Referring to claim 10, the primary reference further teaches *wherein transmitting the base layer on the transmission channel comprises transmitting data from a media server to an image projector* (Fig. 1 ref. sign 180 and respective portions of the spec.).

Referring to claim 11, the primary reference further teaches *wherein transmitting the base layer on the transmission channel comprises transmitting data from a media server to a decoding device* (decoder, Fig. 1 ref. sign 40 and respective portions of the spec.).

Regarding claim 12 as explained in rejection statement of claim 1, Chaddha and Baker teach all of the claim limitations of claim 1 (parent claim).

Chaddha does not disclose *determining if there is enough bandwidth available to the data transmitter to transmit data in addition to the base layer already transmitted comprises calculating at least two average bandwidths used by the data transmitter, each of the average bandwidths calculated over different measuring periods.*

Chaddha teaches the importance of traffic management with QoS by scaling the frame-rate to the desired transmission rate by dropping frames, thereby, intelligently prioritizing certain frames with higher priority over frames with lower priority (See column 6, lines 46-67.) Baker teaches a dynamic weighted resource sharing system and method in which resource allocation is dynamically scheduled for each traffic class, frames with higher priority than other lower priority frames, (for example, a base layer and first/second enhancement layers) based on the averaged traffic load measured for each service class over a period of time and the maximum transmission rate (See column 5, lines 22-43 and column 6, lines 1-6.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic resource scheduling of Baker with two average calculations in the

system of Chaddha. One of ordinary skill in the art would have been motivated to do so in order to maintain frame priority during transmission of the base layer and enhancement layer via designated traffic classes, thereby, eliminating the need to drop frames on a congested or bandwidth starved link as taught by Chaddha (See column 2, lines 52-55.)

Response to Arguments

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Seema S. Rao 10/16/06
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Dlm

October 13, 2006